

I. PRODUCT IDENTIFICATION

Company: Simpson Strong-Tie Company, Inc.
Address: 4120 Dublin Blvd, Suite 400
 Dublin, CA 94568
Emergency Contact Number: 1-800-535-5053 USA
 1-352-323-3500 International

Trade Name: SET - Epoxy Tie Adhesive
Product Description: High strength epoxy based anchoring adhesive
Date Prepared or Revised: August 2003

II. HAZARDOUS INGREDIENTS

| RESIN | | | |
|---|-------------|-------------------------------------|------------------------|
| Chemical Names | CAS Numbers | Exposure Limits in Air ACGIH TLV | OSHA PEL |
| BisPhenol A/Epichloro hydrin (EPOXY RESIN) | 25068-38-6 | N/E | N/E |
| N-butyl glycidyl ether | 2426-08-6 | 25 ppm | 25 ppm |
| Silica, amorphous (fumed) | 67762-90-7 | 2 mg/m ³ * | 6 mg/m ³ ** |
| Titanium dioxide | 1317-80-2 | 10 mg/m ³ | 10 mg/m ³ |

*ACGIH TLV for amorphous silica, fume, respirable fraction.

**ACGIH TLV for crystalline silica, respirable fraction

The remaining ingredients are designated as "trade secret".

| HARDENER | | | |
|------------------------------|-------------|-------------------------------------|------------------------------|
| Chemical Names | CAS Numbers | Exposure Limits in Air ACGIH TLV | OSHA PEL |
| N-aminoethylpiperazine | 140-31-8 | N/E | N/E |
| Nonylphenol | 25154-52-3 | N/E | N/E |
| Silica, amorphous (fumed) | 67762-90-7 | 2 mg/m ³ * | 20 mg/m ³ ** |
| Silica, crystalline quartz | 14808-60-7 | 0.05mg/m ³ | 3mg/m ³ **** |
| Calcium carbonate | 1317-65-3 | 10 mg/m ³ (total) | 15 mg/m ³ (total) |

**OSHA PEL for amorphous silica, total fraction is $\frac{80 \text{ mg/m}^3}{\% \text{SiO}_2}$

***OSHA PEL for crystalline silica, quartz, respirable is $\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$

III. EMERGENCY OVERVIEW

HMIS RATING: Health – 2; Flammability – 1; Reactivity – 0
Hazards – Non corrosive. May cause allergic skin reaction.

HMIS RATING: Health – 3; Flammability – 2; Reactivity - 0
Hazards - Corrosive liquid- See section VII for additional information.

IV. PHYSICAL PROPERTIES

| RESIN | | | |
|-----------------------------|-----------------|--------------------------|-------------|
| Appearance: | White paste | Viscosity: | Paste |
| Physical Form: | Thixotropic Gel | Odor: | Sweet |
| Boiling Point, °F: | N/E | Freezing Point: | N/E |
| Vapor Pressure: | Not Volatile | Specific Gravity: | 1.21 @ 72°F |
| Vapor Density: | Not Volatile | | |
| Solubility In Water: | Insoluble | | |

| HARDENER | | | |
|-----------------------------|-----------------|--------------------------|-------------|
| Appearance: | Black paste | Viscosity: | Paste |
| Physical Form: | Thixotropic Gel | Odor: | Ammonia |
| Boiling Point, °F: | N/E | Freezing Point: | N/E |
| Vapor Pressure: | N/E | Specific Gravity: | 1.27 @ 72°F |
| Vapor Density: | N/E | | |
| Solubility In Water: | Slight | | |

V. FIRE AND EXPLOSION

Flash Point: 250°F
Method Used: Open Cup
Fire Extinguishing Media: Water fog, carbon dioxide, dry chemical, aqueous foam.
Fire And Explosion Hazard: Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F.
Fire Fighting Equipment: Wear full protective clothing and contained self-contained breathing apparatus.

Flash Point: 198°F
Method Used: Closed Cup
Fire Extinguishing Media: Water fog, carbon dioxide, dry chemical, aqueous foam.
Fire And Explosion Hazard: Irritating and toxic fumes may be produced at high temperature. In a fire, may produce carbon monoxide, toxic nitrogen oxide, ammonia, and carbon dioxide.
Fire Fighting Equipment: Wear full protective clothing and self-contained breathing apparatus.

VI. REACTIVITY DATA

Stability: Stable under normal storage conditions.
Condition To Avoid: Incompatible chemicals, heat and open flame.
Incompatibility: Oxidizing agents, acids, organic bases, and amines.
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, aldehydes, acids and other organic substances.
Hazardous Polymerization: Will not occur.

Stability: Stable under normal storage conditions.
Condition To Avoid: Incompatible chemicals, heat and open flame.
Incompatibility: Oxidizing agents and acids.
Hazardous Decomposition Products: Combustion may produce carbon monoxide, carbon dioxide, and nitrogen oxide, and other organic substances.
Hazardous Polymerization: Will not occur.

VII. HEALTH HAZARD INFORMATION**ACUTE**

Eye: May cause eye irritation, swelling, tearing, redness or cornea damage.
Skin: Moderate irritation. May cause skin sensitization, evidenced by rashes and hives.
Inhalation: Moderate irritation to the nose and respiratory tract. May cause CNS depression, evidenced by giddiness, headache, dizziness, and nausea.
Ingestion: May cause irritation to the gastrointestinal tract.

Eye: Severe irritation, swelling, tearing, redness or cornea damage. May cause burns and tissue damage.
Skin: Severe irritation. May cause burns and tissue damage. May cause skin sensitization evidenced by rashes and hives.
Inhalation: Moderate irritation to the nose and respiratory tract. May cause CNS depression, evidenced by giddiness, headache, dizziness, and nausea.
Ingestion: May cause irritation to the gastrointestinal tract. May cause

VII. HEALTH HAZARD INFORMATION (CONTINUED)**RESIN**

May cause CNS depression or other systemic effects.

Systematic Effects: Lungs, eyes, and skin.

HARDENER

headaches, nausea. May cause CNS depression or other systemic effects.

Systematic Effects: Lungs, eyes, and skin.

CHRONIC**RESIN**

The Diglycidyl Ether of Bisphenol A has shown week carcinogenicity in 2-year mice bioassays, produced chromosomal aberrations in cultured rat liver cells, and has shown activity by in-vitro microbial mutagenicity screening. Trace ingredients are potential carcinogens and/or reproductive toxins as indicated below.

HARDENER

Components of this product are not listed as carcinogens in concentration of 0.1% or greater. Repeated or prolonged exposure may cause allergic reaction and/or limited sensitization.

SUSPECTED CANCER AGENT**RESIN**

Some chemicals in the resin are found in the following lists:
Federal OSHA, NTP, IARC

HARDENER

Some chemicals in the hardener are found in the following lists:
Federal OSHA, NTP, IARC

These products contain the following chemicals known to the State of California to cause cancer and/or reproductive toxicity and subject to warning and discharge requirements under the California "Safe Drinking Water and Toxic Enforcement Act of 1986" (as specified in 22 CCR Section 12000):

| | CAS # | % in blend (approx.) |
|-----------------------|--------------|-----------------------------|
| Epichlorohydrin* | 106-89-8 | Trace |
| Phenylglycidyl ether* | 122-60-1 | Trace |

| | CAS # | % in blend (approx.) |
|---------------|--------------|-----------------------------|
| Carbon Black | 1333-86-4 | 0.04 |
| Silica Quartz | 14808-60-7 | 0.9 |
| Toluene* | 108-88-3 | 0.073 |

* ACGIH "skin" designation, may be absorbed through skin

VIII. TOXICOLOGICAL PROPERTIES**RESIN**

Acute Oral (LD₅₀, Rat) – Non toxic
Acute Dermal (LD₅₀, Rabbit) – N/E
Acute Inhalation (LC₅₀, Rat) – N/E

HARDENER

Acute Oral (LD₅₀, RAT) - Non toxic
Acute Dermal (LD₅₀, Rabbit) – N/E
Acute Inhalation (LC₅₀, Rat) - N/E

IX. FIRST AID**RESIN AND HARDENER**

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. CONSULT A PHYSICIAN.

Skin Contact: Remove product and immediately wash affected area with soap and water. Do not apply greases or ointments. Remove contaminated clothing. Wash clothing with soap and water before reuse. CONSULT A PHYSICIAN

Ingestion: If conscious, immediately give two large glasses of water. Do not induce vomiting. Never administer anything by mouth to an unconscious victim. CONSULT A PHYSICIAN.

Inhalation: Remove to fresh air if symptoms listed in Section VII occur. CONSULT A PHYSICIAN.

X. ENVIRONMENTAL AND DISPOSAL INFORMATION**RESIN AND HARDENER**

Action To Take For Spills/Leaks: Keep out of sewers, storm drains, surface waters, and soils. **Small spills:** Soak up with suitable non-reactive absorbent material, neutralize residue if necessary with potassium permanganate, scoop into containers for disposal.

Large spills: Dike and pump into suitable containers for disposal, clean-up residue with absorbent material.

Disposal Information: Place in leak-proof, compatible containers. Dispose of in accordance with federal, state, and local regulations.

XI. STORAGE AND HANDLING**RESIN AND HARDENER**

Storage: Keep away from: acids, oxidizers, heat, or flames. Keep in cool, dry, well-ventilated area in closed containers. Protect containers from physical damage.

Handling: To prevent skin and eyes contact under the foreseeable conditions of use, wear appropriate protective clothing and safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Avoid breathing fumes. Handle in a well ventilated work area.

XII. TRANSPORTATION**RESIN AND HARDENER**

US DOT Classification: Amines, liquid, corrosive, N.O.S. (N-Aminoethylpiperazine), 8, UN2735, PG III.

IATA Classification: Amines, liquid, corrosive, N.O.S. (N-Aminoethylpiperazine), 8, UN2735, PG III, Packing Instruction 818.

XIII. OTHER INFORMATION

CNS – Central Nervous System

N/E – Not Established

This Material Safety Data Sheet (MSDS) is prepared by Simpson Strong-Tie Co. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this MSDS. No guarantee, expressed or implied, is hereby made. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

